

Work Order ID 116676***116676***

Page 1

Wednesday, April 23, 2014 9:18:33 AM

Item ID: D4287-3

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Uhmw U-Channel

Start Date: 4/23/2014 Start Qty: 16.00

16

Cust Item ID:

Required Date: 4/30/2014 Req'd Qty: 16.00

16

Customer:

Reference:

Approvals:

Process Plan: CLDate: 14/04/23

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D4287

A

100

0.00

100

Purchasing

Memo

0.00

Purchasing

Issue P/O: 23962

Material: UHMW (white)

Supplier P#: McMaster-Carr 8672K31

Material release note required

ML 14/25/4

110

Receive & Inspect for Damage & Mat'l Certs

0.00

110

Packaging

Memo

0.00

Packaging

14/18/25 (16)

120

QC6- Inspect dimensions to drawing

0.00

120

QC

Memo

0.00

Quality Control

DAS
27
9-89
14/4/2516

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence
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Work Order ID 116676

Wednesday, April 23, 2014 9:18:33 AM

116676

Page 2

Item ID: D4287-3 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Uhmw U-Channel
 Start Date: 4/23/2014 Start Qty: 16.00 ***16*** Cust Item ID:
 Required Date: 4/30/2014 Req'd Qty: 16.00 ***16*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: 812091A	0.00							
130									
Packaging	Memo	0.00							
Packaging									
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							
Quality Control									

DAS
20
9-89

14-4-28

14-04-28

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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FAULT CATEGORY

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Picklist Print

Wednesday, April 23, 2014 9:18:33 AM

Page 1

Work Order ID: 116676

116676

Parent Item: D4287-3

D4287-3

Parent Item Name: Uhmw U-Channel

Start Date: 4/23/2014

Required Date: 4/30/2014

Start Qty: 16.00

Required Qty: 16.00

Comments: IPP Rev:A 10.11.15 new issue DD Verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
8672K31		Purchased		No		110	f	0.0000	1	16			
8672K31									**				
UHMW U-Channel													

Rec'd 4/25/14 (16)

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

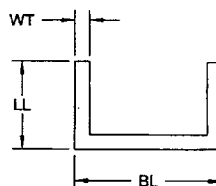
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SPECIFICATION CONTROL DRAWING



D4287-X UHMW U-CHANNEL

DART PART NUMBER	POSSIBLE SUPPLIER	SUPPLIER PART NUMBER	MATERIAL	PURCHASED LENGTH	BASE LENGTH (BL)	LEG LENGTH (LL)	WALL THICKNESS (WT)	WEIGHT (lbs)
D4287-1	McMASTER-CARR	9928K53	UHMW (WHITE)	96.0	1.05	0.75	0.250	2.11
D4287-3	McMASTER-CARR	8672K31	UHMW (WHITE)	96.0	1.25	0.75	0.125	1.29

CY 14104/23

W10: 116676

RELEASED
2010-11-03
JMP

NOTES:

- 1) MATERIAL: PURCHASE PER TABLE
OR
UHMW BLACK TIVAR 1000 VIRGIN MATERIAL
REF. DART SPEC. MUHMW
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: NONE
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: PER TABLE

A	NEW ISSUE	MB	10.10.26
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.10.26		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. DSC-D4287	REV. A SHEET 1 OF 1
TITLE UHMW U-CHANNEL	SCALE NTS
COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO23912**

Purchase Order Date 4/24/2014

PO Print Date 4/24/2014

Page Number 1 of 3

Order From :

VU-MCM001

Ship To : DART AEROSPACE LTD

MCMaster-CARR SUPPLY CO,
P.O. BOX 7690
CHICAGO, IL 60680-7690
US

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 330 995 5500

Buyer

Michael Gregoire

Customer POID

Customer Tax #

10127-2607

Ship To Contact

Terms

Net 10

Ship To Phone

Currency

USD

Ship Via:

FedEx PI collect

FOB

FCA - (Free Carrier)

Ship Acct:

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	90296A108	Heli-Coil Insert	4/28/2014 Yes 4/28/2014		250.00 Each	\$0.83	\$206.50
Line Total:							\$206.50
2	8672K31	UHMW U-Channel	4/28/2014 Yes 4/28/2014		16.00 f	\$3.26	\$52.16
Line Total:							\$52.16
3	93695K58	WINDOW SEAL	4/28/2014 Yes 4/28/2014		150.00 f	\$0.10	\$15.39
Line Total:							\$15.39

Manufacture as per drawing D4287 rev.A
B116676

Manufacture as per drawing D3802 rev.D
B116673

Note:

4/24/2014



200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Purchase Order
PO23912

Page 1 of 1

Order Placed By
Michael Gregoire

04/24/2014

McMaster-Carr Number
2963022-02

Line	Description	Ordered	Shipped						
2	8672K31 UHMW Polyethylene Trim, Screw Mount, U-Shape, 1" Inside Width Your Part Number: 221643200	16 Feet	16	5 - 23 - 15	64 - 45	K31	16 FT	2	
	Unit Price:	\$3.26							
	Extended Price:	\$52.16							

Shipped separately from our Chicago warehouse on 04/24

1	90296A108 18-8 Stainless Steel Screw-Lock Helical Insert, 6-32 Internal Thread, .276" Length, MS21209	50 Packs	50						
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Expected to ship

3	9776K94 Flame-Retardant Hook and Loop, 2" W X 75' L, Adhesive Back, Beige	4 Lengths	4 to ship by 05/08						
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Charges for this shipment

Merchandise Amount:	\$52.16
Total:	\$52.16

Dart Aerospace Ltd

EXP
INV

PI
Long
Straights

3 lbs
1 line

FW1BSP52
04/24/2014
07:47/13:07
585
Cycle 46

1141098716364

